

## RUTGERS SCIENTIFIC SCHOOL

# THE STATE COLLEGE

FOR THE BENEFIT OF

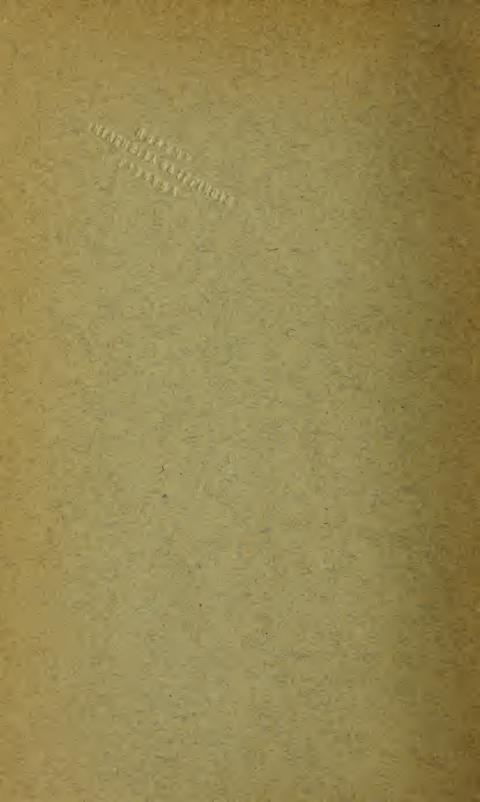
AGRICULTURE AND THE MECHANIC ARTS

NEW BRUNSWICK, N. J.

Forty-fifth Annual Report, October 31, 1909

TRENTON, N. J.

MACCRELLISH & QUIGLEY, STATE PRINTERS.



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### Report of the State Board of Visitors

To His Excellency John Franklin Fort, Governor of the State of New Jersey:

Honored Sir—The Board of Visitors to the State Agricultural College herewith present their forty-fifth annual report upon the present condition and courses of instruction at that institution, as required by the act creating the Board, entitled "An act appropriating scrip for the public lands granted to the State of New Jersey by the act of Congress approved July second, one thousand eight hundred and sixty-two," and approved 4th April, 1864.

The members of the Board made an annual examination of the students pursuing the regular and special courses of instruction on the 5th of March, 1909. They also visited the laboratories, the draughting room, the military drill hall, the collections of the institution and the farm provided for the State Agricultural College by the Trustees of Rutgers College. They also attended the closing exercises of the classes in the Short Courses in Agriculture.

During the year the membership of the Faculty has been 40, and all but four of this number have given instruction in the Scientific School.

The enrollment of students for the year was 510; graduate students, 3; seniors, 32; juniors, 35; sophomores, 48; freshmen, 117; special students, not candidates for a degree, 60. There were also 70 students in the Classical School and 145 pupils in attendance at the Preparatory School. The degree of Bachelor of Science was conferred upon 32 graduates in June, 1909. Of these graduates, 1 had pursued the Course in Agriculture, 1 the Course in Biology, 16 the Course in Civil Engineering, 6 the Course in Chemistry, 7 the Course in Electricity, and 1 the Course in General Science.

#### CONDITION AND PROGRESS.

The year opened with a total enrollment of 307 students, the largest in the history of the institution. This necessitated the immediate appointment of an additional Instructor in Mathematics and an additional Assistant in English.

The new Engineering Building, erected at a cost of \$75,000, was completed in April, 1909, and immediately occupied. The building has been furnished and equipped for the uses of the classes in Civil, Electrical and Mechanical Engineering at an outlay of \$20,000, appropriated by the State of New Jersey.

The State of New Jersey has also increased the appropriation for State Scholarships from \$12,000 to \$15,000.

Two additional Fellowships, one in Chemistry and one in Political Science, have been established.

Individual contributions have enabled the Trustees to improve and beautify a portion of the new Neilson Campus, in which work they have expended nearly \$4.500.

The following is a list of the members of the graduating class of 1908, together with the subject of each graduate's thesis:

### GRADUATION THESES—CLASS OF 1909.

EDWIN CONRAD ALFORD, Brooklyn, N. Y.

Chemical Studies in Photographic Processes. Blue Printing.

ROBERT GOLDSMITH ALLEN, Red Bank, N. J.

Method of Construction of Dykes and Breakwaters as employed by the United States Government.

Theodore Frelinghuysen Appleby, Old Bridge, N. J. The Water Supply of New York City.

RAYMOND LESLIE BALDWIN, Caldwell, N. J. Dairying and Handling of Milk.

MYRON HAMILTON BEEKMAN, Red Bank, N. J. Complete Test of a Compound Generator.

ALLEN DALE CLOKE, Rahway, N. J.

Dam of the Middlesex Water Company, near Rahway, N. J., on Robinson's Branch, Rahway river.

Samuel S. Demarest, Bergenfield, N. J. Bulkhead Walls in New York Harbor.

### REPORT OF THE STATE BOARD OF VISITORS

HERBERT BENNETT FENN, Jersey City, N. J.

The Development of High Tension Transmission with Particular Reference to American Practice.

CARL HERBERT GREENEWALD, Moorestown, N. J.

The Method of Finite Differences applied to Special Problems in Algebra.

ERNEST FREEMAN HAWLEY, New York City, N. Y.
The Analysis of Iron, Copper and Lead Ores.

DAVID LOUIS HENDLER, New Brunswick, N. J.
The Evolution of Road Construction.

JOHN WHILLDIN JANVIER, Bridgeton, N. J.

The Extraction of Nitrogen from the Air. (Translated from Escard's "Les Industries Electro-chemique.")

HANS MAX KALETSCH, Perth Amboy, N. J. The Analysis of Copper Ore.

BENJAMIN MARSHALL MILLER, Oxford, N. Y.

A Craniometric Study of Some of the Primates.

Frank Ambrose Morrison, Ridgefield, N. J. A Re-survey of the Neilson Campus.

GEORGE WASHINGTON MULHERON, Trenton, N. J.

Plan of the Proposed Sewerage for parts of the Sixth and Eleventh Wards of Trenton, New Jersey; and the Construction of a part of the Main and one Lateral.

JULIUS JOSHUA NEWMARK, Plainfield, N. J.

Improved Methods of Road Preservation and Dust Prevention.

ARTHUR DOUGLAS PRINGLE, Albany, N. Y.

The Septic Tank and its Relation to Proper Sewage Disposal.

WILLIAM RAYMOND RANSOM, Rahway, N. J.

The Water Filtration System at Rahway, N. J.

Frederick Foster Read, Arlington, N. J.

Design of a Typical Reinforced-Concrete Floor.

RALPH FRANK RITTER, Rahway, N. J.

Location of Fence and Deed Lines of Neilson Campus.

CLAYTON SYDNEY SMITH, Newark, N. J.

Syntheses of Salicylic Acid and Derivatives.

RHEA GORDON SMITH, Plainfield, N. J.

Quantitative Determination of the Constituents of a Soil.

FORD C. SOMMERS, Cobleskill, N. Y.

Concrete and Concrete Construction.

ZACHARYA HIRSCH SRAGER, Plainfield, N. J.

The Septic Treatment of Sewage. In Conjunction with Contact Beds.

RUDOLPH FREDERICK STEINKE, Elizabeth, N. J.

Instruction to Motormen.

FITZGERALD TISDALL, JR., New York City.

The Design of a Switchboard for the Engineering Building of Rutgers.

WILLIAM LLOYD VANKEUREN, Union Hill, N. J.

Engineering Methods as Applied to Electric Railway Construction.

RUSHWORTH BURTON VANSICKLE, New Brunswick, N. I.

A Review of the Concrete Construction in the Rutgers College Engineering Building.

WILLIAM HENRY WALLACE, Moorestown, N. J.

Mechanical Filters, with Special Reference to the Warren Filter.

RAYMOND BENJAMIN WALLING, Port Monmouth, N. J.

Complete Test of a Compound Generator.

JOHN MICHAEL WENNEIS, Weehawken, N. J. Sugar.

### Appointees to State Scholarships Under Act of 1864.

	No.		
Counties.	Sch	. Appointees. Class	. Residence.
Atlantic	I	Christian J. Mueller1913	Atlantic
Bergen	I	Walter G. Winne1910	Bergen
Burlington	I	Francis E. Weis1913	Mercer
	2	Harold J. Cadmus1912	Bergen
	3		
Camden	I	Arthur T. McMichael1910	Camden
	2	E. Tiel Smith1912	Camden
Cape May	I	Harry M. Allen1913	Somerset
Cumberland	1	Frank E. Field1913	Somerset
Essex	I	William V. Becker1911	Essex
	2	Roscoe W. DeBaun1911	Essex
	3	Joseph Burstein1912	Essex
	4	Frederic Glander1912	Essex
	5	Donald Ross1912	Essex
	6	R. Parkhurst Dickerson1913	Essex
Gloucester	I	Claremont W. Masker1913	Somerset
Hudson	I	George D. Auchter1912	Hudson
	2	Carl F. N. Hegstrom1912	Middlesex
	3	Ethan C. Rogers,1912	Middlesex
	4	Harold Sillcox1911	Essex
	5		
	6		
Hunterdon	I	A. Arthur Nelson1912	Middlesex
Mercer		W. Wilson Faussett1910	Mercer
	2	Scott M. Fell1911	Mercer
Middlesex	_	Alstyn F. Randolph1913	Middlesex
2.	2	William H. McCallum1913	Middlesex
Monmouth	_	Tunis Denise	Monmouth
	2	William B. Duryee, Jr1910	Monmouth
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### REPORT OF THE STATE BOARD OF VISITORS

3.7			
No Counties. Sch		Class	Residence.
Morris	Earle B. Van Ness		Morris
WIOTHS	Willard C. Durham .		Middlesex
OceanI	Willis E. Rochford.		Mercer
Passaic	John R. Sexton		Monmouth
1 dSSdlC	Joini R. Sexton	1911	Monnouth
Salem	Melvin M. Hunt	. 1012	Middlesex
SomersetI	Nathaniel C. Wyckof	2 0	Somerset
SussexI	Leroy C. Wilsey		Essex
Union	Edgar C. Cook		Monmouth
2	Edgar C. Cook		Monnouth
WarrenI	Will G. Atwood	1010	Warren
Appointees to	Assembly District Sch	nolarships Under Ac	t of 1890.
Name		County	Class
William P. Garrison	n	·Cumberland	1910
Morgan Hand, Jr.		.Essex	1910
Edwin T. Leslie		.Essex	1910
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Clarence E. Fulton		.Hudson	1911
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William H MacDo	nald	Hudson	
Andrew T Manley		Forey	
Warren W Oley	• • • • • • • • • • • • • • • • • • • •	Rergen	1011
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Name	County	Class
Lloyd M. Van Ness	Essex	
Walter C. Bauer	Union	
John V. Bissett		
Edward F. Blatz	Hudson	1912
Walter C. Bowen	Cumberland	1912
Fred A. Briegs	Monmouth	1912
Lester E. Cook	Essex	1912
Henry C. Cooper		
Thomas S. Cooper		
Elbron Fisher		
Samuel F. Foster	Ocean	
Russell W/. Gies	Essex	1912
Jacob W. Groendyke		
Paul W. Haasis		
Aaron M. Hageman		
George E. Hageman		
Albert L. Hagen		
Herbert W. Heilmann		
Henry V. Jacobson		
Oran Keller		
August Leistner		
Weston Lennox		
Lionel F. Liebschutz		
Alson C. Llewellyn		
John O. Marsh		
George W. Martin		
John D. Morrison		
Louis F. Merrill		
Herbert R. Peebles		
Harold C. Pierson		
George R. Robinson		
Robert Schmidt	Cane May	1012
Elmer B. Shapiro	Somerset	1012
Stephen P. Smith	Cumberland	
Harold M. Terrill		
Arthur B. Titsworth		
Charles A. Titus		
Walter M. Van Wagner		
Reinhold vom Lehn		
Elmer L. Walker		
Paul Walrath	Essex	
Richard C. Armstrong	Hudson	
Walter Bastedo		
Whitfield J. Bell		
Arthur D. Bergen	Morris	1913
James F. Burke	Hudson	
Edwin F. Cathcart	Middlesex	1913

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Name	County	Class
E. Dudley Chase	Essex	1913
Jacob Chobricher	Essex	1913
Frank H. Conover		
Ralph E. Cooper	Essex	1913
Reginald B. Crowell	Hudson	1913
Louis M. Davis	Somerset	1913
Clifford E. Dennis	Sussex	1913
Cecil G. Fielder	Burlington	1913
F. Walker Flanagin		
Henry W. Foulds		
Elmer S. Grymes		
Cuthbert W. Haasis		2 4
Walter Hornbruch		
Raymond D. Howell		
Howard F. Huber		
Frederick J. Johnson		
John H. Johnson		
Leslie C. Lantz	Warren	1013
Joseph D. Laurent		
Jesse B. Leslie		
Oliver F. Mitchell	Hunterdon	1013
Herman A. Newmark		
Lawrence H. Opdycke		
Walter E. Orvis		
Walter M. Peacock		
Arthur A. Prentiss		
Irving R. Rossell		
Floyd E. Rue		
Harold A. Russell		
Morris Schecter		
Cornelius F. Schenck		
Harold W. Schenck		
Samuel M. Sharkey		
Earl R. Silvers		
Herbert Simon		
Horace T. Smedley		
T. Darmon Smith		
William E. Staat		
Joseph H. Stone		
Charles C. Stover		
Frederick N. Vanderipe		
Henry L. Van Mater		
Charles K. Van Riper	Passaic	1913
S. Neale Williams		1913
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All of which is respectfully submitted.

D. DEMAREST DENISE, President of the Board of Visitors.

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<sup>\*</sup> Died October 18th, 1909.

<sup>§</sup> Died March 21st, 1909.

<sup>‡</sup> Resigned October 8th, 1909.

<sup>†</sup> Trustee-elect.

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Associate Professor of German

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Curator of the Geological Museum

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Collegiate Church Professor of Logic and Mental Philosophy

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Director of the Department of Clay Working and Ceramics

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Director of the Gymnasium

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Frederick Charles Minkler, B.S.A.

Instructor in Agriculture

ALBERT RITTENHOUSE JOHNSON, B.Sc Instructor in Mathematics and Graphics

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LUTHER HARNED MARTIN  Assistant in the College Office
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2 DITT

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Assistant in Entomology

PERCY EDGAR BROWN
B.Sc., A.M. (Rutgers)
Assistant in Bacteriology

JOHN MICHAEL WENNEIS
B.Sc. (Rutgers)
Assistant in Chemistry

### Trustees' Report.

Rutgers College,
New Brunswick, November 30, 1909.

To His Excellency John Franklin Fort, Governor of the State of New Jersey:

Honored Sir—In compliance with the act of Congress, approved 2d July, 1862, and the act of the Legislature of New Jersey, approved 4th April, 1864, I beg leave to submit, on behalf of the Trustees of Rutgers College, the forty-fifth annual report of Rutgers Scientific School.

The professors and instructors composing the Faculty of Rutgers College now number forty. In addition there are eight instructors and assistants in the departments of instruction.

The Rev. William I. Chamberlain, Ph.D., Professor of Mental Philosophy and Logic, since January, 1906, having resigned, to the great regret of the Trustees and Faculty, to accept the office of Secretary of the Board of Foreign Missions of the Reformed Church in America, his resignation was accepted to take effect June 30th, 1909. No successor has yet been chosen, but the work of the department is being fully carried on for the present by Preceptor Walter T. Marvin, Ph.D., of Princeton University. Ralph Brewster Parrott, B.Sc., Captain 27th Infantry, U.S. A., Professor of Military Science, approaching the completion of his three years' detail in September, 1909, received, to the great gratification of the College officers, additional detail of one year, postponing the expiration of his term until the furthest possible limit, September, 1910. Alfred A. Titsworth, D.Sc., heretofore Professor of Civil Engineering and Graphics, has been made Professor of Civil Engineering. Richard Morris, Ph.D., Associate Professor, has been promoted to be Professor of Mathematics and Graphics. Frank Randall Pratt, B.Sc., Instructor in Mathematics and Graphics, has been transferred to other de-

partment and appointed Instructor in Physics. William Bertram Twiss, A.B. (Dartmouth, 1906), A.M. (Harvard, 1907), lately Professor of English in Temple University, 1907-1909, has been appointed Instructor in English. Erik Schjöth Palmer, Ph.B. (Yale, 1906), lately Professor of Mathematics in Rollins College, has been appointed Instructor in Mathematics and Graphics. John Michael Wenneis, B.Sc. (Rutgers, 1909), has been appointed Assistant in Chemistry. The Trustees have adopted as custom of appointment that instructors chosen this year and hereafter be without seat in the Faculty. Heretofore only assistants have not been included in the formal Faculty. The corps of instruction of necessity so increases that it seems desirable that the Faculty, as a voting and ruling body, should consist only of professors and associate professors, and assistant professors if such at any time be appointed. It may prove, wise, also in the near future to organize the several departments of instruction more formally, more definitely constituting heads thereof as may be possible and appropriate.

Clarence Ward, A.M. (Princeton), has served as Lecturer on Architecture, conducting the course in the Fine Arts department during the second term of the year. Special lecturers on the Luther Laflin Kellogg Foundation have been Mr. C. Raymond Beazley, Fellow of Merton College, Oxford; Professor Eugen Kühneman, of the University of Breslau, Visiting Professor at Harvard University; and the Honorable George B. McClellan, Mayor of the city of New York.

The registry of students for the year, 1908-9, in regular college courses, was the largest the college had ever had. The entering class quite far exceeded any preceding. One hundred and fifty Freshmen were admitted, and about one hundred and forty came into actual attendance. Now for the year 1909-10 the entering class is of virtually the same number as last year, and the total registry once more considerably exceeds that of any year preceding. There are 340 students in all courses of Rutgers College leading to degree. The number of students expected in the Short Courses will raise the total to more than 400. The decided increase in the number of candidates for entrance is ex-

### REPORT OF THE BOARD OF TRUSTEES

plained in some measure, no doubt, by the development in the College's corps of instruction and in its equipment recently become possible, but as well, and more, perhaps, by the publicity given in appropriate ways to the singularly excellent work done by the College and to the varied advantages it offers to both classical and scientific students. The increase in the number of candidates presenting themselves at the county competitive examinations for State scholarships is especially notable. In 1906 there were 47 such candidates, in 1907 there were 58, in 1908 there were 89, and now in June, 1909, there have been 135. During the year 1908-9 every one of the competitive scholarships for which the Appropriation Bill of the New Jersey Legislature had made provision, one hundred in all, was taken. Now for the year 1909-10 every such scholarship provided for, 125 in all, is taken. The wider territory from which the students have come is also noteworthy. The record of the student body in studies and in general college life, in literary and athletic activities, has been prevailingly good. Intercollegiate relations have been very successfully sustained. Competition within the college itself for the various prizes offered and the quality of such competitive efforts have developed. The spirit of the students in administering student affairs and in co-operating with the Faculty on lines of common interest and in sustaining best standards of college life deserve especial emphasis.

The Legislature at its recent session enacted a detail amendment to the Scholarship Act of 1890, amended 1905, providing that the county competitive examinations be held on the first Friday in June and the Saturday following, instead of on the first Saturday, and that the examinations be held at place or places other than the County Court House if the county and city superintendents so elect. The one item of change has been made necessary by the number of entrance examinations and the time appropriate to each, involving more than a single day's appointments. The second item of change simply offers a proper liberty to the Superintendents of Education, of which, however, none this year have thought it necessary to avail themselves. The Trustees of the College and the Board of Visitors have enacted a broadening of

curriculum which distinctly enlarges the advantages placed at the disposal of the State for its scholarship students. They have arranged that all courses of study offered in Rutgers College be offered in its Scientific School. This means that candidates for State scholarships in the Scientific School, and all students in that school, have the privilege, for example, of entering upon courses of study in the classical languages as well as in the modern languages and sciences and other studies heretofore open to them. This action conforms with the best idea and custom in the various State universities—that no course of study usual to colleges and universities be excluded from the State institutions, or from students on State scholarships. Its importance to the State, as well as the individual student, is apparent in that the State may wisely desire to educate for its citizenship men entering the so-called learned professions, as well as men entering the so-called scientific industries.

The appropriations of the State for college purposes available during the year Nov. 1st, 1908-Nov. 1st, 1909, have included, in addition to usual amounts for landgrant interest, scholarships, ceramics department, and short courses in agriculture, the sum of \$20,000 for furnishing and equipment of the Engineering Building. The appropriations of the State made at the recent session of the Legislature, and to be available Nov. 1st, 1909-Nov. 1st, 1910, excluding, of course, the above \$20,000 special item, show two other changes. The amount appropriated for scholarships is made \$15,000, instead of \$12,000, and the amount for ceramics department is made \$2,500, instead of \$5,000. The first change, a very gratifying one, is occasioned by the fact that the increased number of students on State Scholarships will for the first time call for more than the \$12,000 heretofore appropriated and probably for the full \$15,000 which the amendment of 1905 provides as a possible amount for this purpose. The second change, greatly regretted by the College, and apparently occasioned by the Legislature's definite policy of retrenchment at many points, will seriously impair the work of the ceramics department. Already the services of an experienced assistant have been dispensed with, and certain activities of great value to

### REPORT OF THE BOARD OF TRUSTEES

the State can be for the coming year prosecuted in less adequate degree. It is to be hoped that the executive and legislative officers of the State of New Jersey will not only continue in sympathetic attitude toward the College and its work and its usual claims upon the State, but as well follow out a progressive policy in the College's support. It is extremely desirable, of course, that the appropriation for the ceramics department be restored to its former amount, the \$5,000 provided for by the Amendment of 1907 to the Act of 1902. It is further a fair question whether the State should not and will not, in connection with the Scholarship Act, return from the less liberal amendment of 1905 to the more liberal provisions of the original Act of 1800. The amendment's limiting of scholarship money to \$15,000 seems unfortunate in view of the constant increase in the number of qualified candidates for scholarships; the amount will be, without doubt, henceforth insufficient to provide for those who qualify; and it seems especially unfortunate, and perhaps especially open to revision, in that the original idea of the College and of the Legislature, incorporated in the Act of 1890, was a scholarship available and to be supported for each assembly district in the State, each year, a total of such students thus intended substantially exceeding that suggested in the amendment of 1905. The college will even next year, perhaps, be compelled to confront the question what to do with a surplus of qualified men presenting themselves on the basis of county examinations successfully passed. It may also be added that the amount per scholarship might properly be taken under consideration. It is now \$120. This is substantially less than the amount at present charged upon pay students; and the present charges must soon be increased. Even such increased charge, it will be readily understood, falls far short of the College's expense in educating a student. The Trustees have already resolved that, beginning with the class of 1914, the annual tuition fee shall be \$100, the incidental fees \$30 and the departmental fees \$30, a total of \$160. This will be conceded to be only a fair and necessary charge; and the State may reasonably consider whether it should continue to pay only \$120 for each of the students for whose education its scholarship

law intends to provide. The further general remark may be made that the State may well consider a broad policy of generous provision for the constant and growing needs of the growing institution, that it may rapidly and vigorously give it a largest possible usefulness, as the majority of the States are forwarding their colleges or universities. It is proper to look to the State, perhaps, for a special appropriation at the coming session of the Legislature for the furnishing and equipment of the proposed Chemistry Building, as the Engineering Building was recently provided for.

The work of instruction for the year presents no special features of importance. The standards required for entrance upon and for continuance in courses of study are, we believe, substantial and reasonable, the wisest possible and a guarantee of the College to all educational authorities. The number of points required for entrance to Bachelor of Science course increases in 1910 from the present twelve and a half to thirteen, and in 1912 to fourteen, while the requirement for entrance to Arts or Letters course has long been and will remain fifteen points. In view of recent public discussion concerning customs of admission at various colleges and universities, it may be proper to add that, in applying these point standards, Rutgers does not admit a candidate with more than three deficiencies and that it requires the removal of any and all entrance deficiencies before the beginning of the second college year. It is also required that every condition incurred in any college year be removed before the beginning of the next college year, failing which the student is dropped from his class. This law of scholarship is perhaps unusually strict, and it has received some adverse criticism. It has, however, plainly justified itself in the relief secured for the current work of each college year, in the excellent and prevailing success of students in meeting the requirement, and in the establishing of a principle of prompt and direct doing of a given work. Another item of perhaps unusual definiteness in the College's customs of instruction is its virtually absolute refusal to receive special students. While it might seem a hardship in some individual case to refuse a course, or group of courses, to a man

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not candidate for a degree, whether fitted for college entrance or not, it seems to the College officers a clear and large advantage to the College and to its body of students that such privilege be denied. Courses of study are now very liberally arranged, while certain suggestions of further provision remain in abeyance awaiting the expedient time or the needed funds. In addition to the enlarged offering in the Scientific School already referred to, the present enlarged opportunity in the department of education or pedagogy deserves emphasis. It is hoped that courses in finance and commerce and in sociology may be possible in the not far distant future. The addition to the academic year for engineering students of one hundred hours of summer work, field surveying or shop work, has gone into effect very satisfactorily; it means about two weeks of instruction of greatest practical value to prospective civil, electrical, or mechanical engineers. The rules for the attainment of post-graduate degrees have been somewhat revised and made apparently fully appropriate. The question of a Summer School for teachers and others who may wish courses of study for six weeks in the summer begins to assert itself. Such summer schools are maintained in many, if not most, of our States, by their colleges or universities. Many teachers and others in our own State, we may naturally suppose, desire such opportunity; the State College, with its buildings, equipment, and instructors, seems the natural and proper place; and the State may consider it wise and worth while, for the sake of its teachers especially, to direct the establishment of such school and to appropriate the funds for its annual support. Another line of instruction in which the State surely would have special interest and for which it might be disposed to provide the funds necessary to establish and maintain, is that of sanitary science and sanitary engineering. The State Board of Health, through a distinguished committee, has conferred with officers of the College as to the matter. A regular college course in such subject would readily co-ordinate with the present course in biology, and short courses in the summer could perhaps be well housed in the Agricultural Building at the College Farm. Suggestion of a forestry course has also been brought before the

College. For such undertakings, however, substantial financial provision is necessary.

The most important property matter of the year has been the completion of the Engineering Building. Its cost has been \$75,000, of which Mr. Andrew Carnegie gave \$25,000. It is exceedingly well built and admirably arranged for the work of the civil, electrical, and mechanical engineering departments. The furnishing and equipment have cost \$20,000, that amount having been appropriated very generously for the purpose by the State. It was first occupied immediately after the Easter recess; opening exercises were held with address by Mr. L. F. Loree, class of 1877, President of the Delaware and Hudson Company. The next new erection will be a Chemistry Building. It is imperatively urged by the needs of the chemistry department, now very inadequately provided for, and by the growth of the Experiment Station work, in whose building the chemistry is now housed and for whose better accommodation, with the agricultural, biological, horticultural and entomological departments of the college, the chemistry should now be removed. It is thought that a sufficiently large building of good construction can be built for \$50,000. Although no donor of such amount for this purpose has yet appeared, the Trustees have asked competitive designs for the erection and have resolved to proceed with the erection. Assuming that the money be secured for the building itself from private source or sources, perhaps the State would appropriate for furnishing and equipment the \$25,000 surely needed for such purpose. Following upon the Chemistry Building, a new Dormitory seems likely to be soon demanded. Winants Hall has been fully occupied during the year. The number of students in College the coming year will apparently be considerably greater. This dormitory, together with the partial privilege of Hertzog Hall and the Fraternity houses, does not now accommodate them, and moderate annual increase of students may continue. It is now necessary to seek out private boarding houses in the city, similar to those in former years housing the students. Such securing of rooms may quite satisfactorily satisfy the situation for the moment, but the real satisfaction of the students' need and of

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college propriety can only be through the provision of a new dormitory building.

The College property in general has been kept in good repair and has received some substantial and extensive improvements. The most notable of these has been the macadamizing of the roadways of Bleecker Place, Neilson Campus. The central lawn and double row of trees established years ago have made a beautiful boulevard at once possible upon the construction of good roadways. This has been accomplished at considerable expense, provided for from the administration fund of the year. Grading and lawn-making on Neilson Campus have also continued, and are complete in front of the Engineering Building. Tennis courts for the use of the students, and the Faculty as well, have been constructed on the campus along Seminary Place. Between the Engineering Building and the tennis courts it is hoped to erect the Chemistry Building. By generous gift from Dr. John C. Smock, class of 1862, the College has been enabled to plant trees and shrubs on both the Queens Campus and the Neilson Campus, adding much to their appearance now and to their promise for the future. The laying of sidewalks has been continued, that on College Ave. and Somerset Street, Preparatory School frontage, having been accomplished, leaving only two sections of the campus still needing such work, the south side of Hamilton Street and the east side of Bleecker Place. It is greatly to be desired that the properties adjoining Neilson Campus, in the same block, should be secured when possible and made part of the campus. The suggestion is also earnestly made that arches and gateways, memorial perhaps, be established on Hamilton Street at George Street and College Ave., emphasizing the unity as well as boundary of the College property and adding to the beauty of the united campus. It might be that similar erections on Seminary Place at George Street and College Avenue would follow, uniting present Seminary properties and contributing to a desirably united appearance of the properties of the two so closely associated institutions. Some advance has been made in the acquiring of the property on College Avenue, desired for the Preparatory School Home. A generous gift from Mr. J. Howard Ford

enabled the College to purchase two lots with house and barn which intruded upon an otherwise unoccupied block; the house and barn were at once sold again and removed from the premises, leaving the block now entirely clear.

The Librarian reports the addition of 2,163 volumes to the College Library during the year, of which about half have been by purchase and half by donation. The gifts have come from many donors, including many of the alumni of the college, who have thus shown their enduring and substantial interest in the College and some of whom each year donate valuable books or periodicals. Files of periodicals of great value are being received and made more complete. The purchases have been quite exclusively for departmental equipment, while certain departments, as, for example, that of Romance Languages, still remain quite inadequately equipped. The total number of volumes now in the library is 50,188. The open hours have been slightly increased, now running without intermission from 8 A. M. to 9 P. M. save on Saturday, when the closing is at 4:30 P. M., and on Sunday, when the library is closed all day. Some special work of the year has been the separating of duplicate periodicals and books and their exchange for desired printings, the preparation of a bibliography of all printings in the library related in any way to the State of New Jersey, and the cataloguing of the coin collection. The coin collection is very valuable, and its long delayed placing in appropriate cases and its complete listing and description will be of great permanent importance. The working force has included the Librarian, an assistant, five student helpers and a stenographer. At least one additional full-time assistant should be secured. Other need of the library has been additional shelving for the constantly accumulating books. This need for the present, fortunately, is met, inasmuch as a gift of the class of 1889 at its twentieth anniversary of graduation is, by their consent, applied to this object and cases are now being made to be placed as alcoves in the library transepts.

The Curator of the Geological Museum reports that gifts in large number and of substantial value continue to be received. Especially fine mineral specimens from New Jersey sources, from

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the Cobalt district, Canada, and from Tennessee are among the donations of the year. The collection of maps and reports has also been substantially increased, and especially has the department library been developed by more than 500 volumes in part from the State Geological Survey and in part from College library duplicates. The especial need of the museum, reported by the Curator now for two or three years, the need of more cases and more classifying, will be for the present satisfied—gift of the class of 1874 at its twenty-fifth anniversary of graduation is, by its consent, applied to this object, and the more adequate equipping now proceeds.

The three special departments, Ceramics, Short Courses in Agriculture, and the Experiment Station, are reported in their separate bulletins and only call for briefest mention here. The Ceramics Department has satisfactorily maintained its work of instruction and of scientific investigation and public service as well. A good number of students have taken the course and the services of graduates have been in great demand. Close relations have been maintained with the ceramics industry in the State and clays sent by citizens of the State for determination of value have been tested in the department's laboratory. Tests of paving brick have also been made for various municipalities at the request of their engineers. The Short Courses in Agriculture were attended by seventy students, a larger number than in either preceding year. The course of study was conducted with great efficiency and the work was apparently more satisfactory than ever before. The indications are that the attendance of the coming winter will again show substantial increase. The College Experiment Station has conducted its work along progressive lines, broadening its scope and increasing its service. The investigations as to the artificial propagation of oysters have been advanced: much work has been done in locating the browntail moth lately come into the State: and attention to the mosquito problem has been continued so far as funds permitted. The work in soil chemistry and bacteriology has been greatly enlarged, and results already are not only of a high scientific value but also in their practical bearing apparently of the greatest

significance. New and expert attention is being given to inquiry and experiment in plant physiology. The College Farm, although more largely than ever before given to experiment, showed unusually good results from usual farming operations. The land is improving rapidly, large crops are obtained even under unfavorable conditions, and the assets are increased. The farm becomes more useful to the State each year as a means of demonstrating good methods of practice. Its teachings are widely followed.

The year has been marked by some special occasions worthy of note. Charter Day in the fall, celebrating the one hundred and forty-third birthday of the College, was distinguished by the presence of the Governor of New Jersey, the Hon. J. Franklin Fort, and the Mayor of New Brunswick, the Hon. W. Edwin Florance, both of whom made addresses, constituting, with address by the President of the College, the program of the occasion. Commencement Day in June was distinguished by its celebration of the one hundredth anniversary of the erection of the Oueen's Building. Addresses on this occasion were made by the Rev. Henry Evertson Cobb, D.D.; Edward S. Wilde, Esq., and the President of the College. The family of the Rev. Ira Condict, Acting President in 1809, and the family of Abraham Blauvelt, Chairman of the Trustees' Building Committee in 1809, were represented on the program: the Frelinghuysen, Hardembergh, and Livingston families, so closely associated with the college's early days, were represented in the audience, and descendants of John McComb, the architect of Queens Building, were present. The day was also marked by the presence of the Governor at the centennial exercises, at the alumni dinner and at Commencement. Commencement week had further special occasion in exercises celebrating the fortieth anniversary of the founding of the Phi Beta Kappa Society, Alpha of New Jersey, at Rutgers College; the address was given by Professor Edwin A. Grosvenor, of Amherst College, President of the United Chapters of the Phi Beta Kappa.

During the year, at the initiative and through the activity of the Rev. Dr. William Elliot Griffis, Class of 1869, the Trustees,

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Faculty, students and friends of the College united in arranging for a memorial tablet to be presented by Rutgers College to the University of Utrecht in honor of the Rev. John H. Livingston, D.D., a former student at Utrecht, and active promoter of Rutgers (Queen's,) in its early days and President from 1810 to 1825. This very handsome tablet with appropriate inscription will be presented at Utrecht some time during the summer by Dr. Griffis, regularly accredited to represent Rutgers in such ceremony.

This report should not omit mention of the General Catalogue of Officers and Graduates of Rutgers prepared by the Biographer of the Alumni Association, the Rev. Dr. John H. Raven, and just now issued from the press. Its record is remarkably complete from the origin of the College to the present time, and the publication is of rare value to the College and all its friends. The last issue of such work was twenty-five years ago, and the work at this time necessary to accomplish an up-to-date and accurate book was large and arduous. Dr. Raven has given to the task generous time and effort for a year and a half and a most satisfactory volume is the result. High appreciation and grateful acknowledgment are due the compiler for this service so freely and gladly given to his Alma Mater.

In presenting this report I beg to append as part thereof a statement describing the college courses and conveying general information, also schedules of entrance requirements and of curriculum, together with full registry of Rutgers College for the year 1909-10.

All of which is respectfully submitted.

W. H. S. DEMAREST,

President.

### Requirements for Admission.

The requirements for admission to the Freshman Class for 1910 are fully stated in the catalogue of 1909-10, which may be had on application. A brief statement in tabular form here follows, for the understanding of which it is necessary to remember that a "point may be defined as a subject of the secondary school curriculum pursued throughout an academic year for four or five periods a week."

FOR THE A.B.	COURSE.  Points	FOR THE LITT.B. COUR	RSE.	FOR THE B.SC.	COURSES.  Points
English	3	English	3	English	3
Mathematics	3	Mathematics	3	Mathematics	4
Latin	4	Latin	4	Foreign Lang	uages 2-4
Greek	3	German or French	3	Science	1—3
History	2	History	2	History	1-3
		-			
	15		15		*14

- I. The number of points required for admission to the A.B. and Litt.B. Courses is 15, as heretofore. In 1910 the number of points required for admission to the B.Sc. Courses will be as follows: 3 in English, 4 in Mathematics, and 6 in other subjects, as set forth below, making a total of 13 points. In 1912 14 points will be required, the additional point to be offered in either Language, Science, or History, as the candidate may prefer.
- 2. In English the Standard College Entrance requirement, equated as 3 points, is in force for admission to all courses.
- 3. In Mathematics for the A.B. and Litt.B. Courses the requirement is Algebra through ratio and proportion and progressions and Plane Geometry, equated as 3 points. For the B.Sc. Courses the requirement is Algebra as above, Plane and Solid Geometry, and Plane Trigonometry, equated as 4 points.
- 4. In Latin a standard four-year course is required for admission to the A.B. and Litt.B. Courses, covering beginner's Latin, Cæsar, Cicero, Virgil, and prose composition, equated as 4 points.
- 5. In Greek a standard three-year course is required for admission to the A.B. Course, covering beginner's Greek, Xenophon, Homer, and prose composition, equated as 3 points.

<sup>\*</sup> The requirement of 14 points will not be fully in force until 1912. Details are stated in sections 1, 3, 6, 7 and 8.

#### Courses of Study

6. In the modern languages other than English, there is no requirement for admission to the A.B. Course. For the Litt.B. Course, three years of German or of French (i. e., "Intermediate" German or French as defined by the Uniform Entrance Examination Board) are required, equated as 3 points. For the B.Sc. Courses, a minimum of two years and a maximum of four years (not more than three in any one language) may be offered, and will be equated accordingly; either German or French will be accepted, but candidates are urged to offer at least one year of German; two or three years of Latin will be allowed for the present as an equivalent for a corresponding amount of a modern language.

7. In Science, for the B.Sc. Courses one year's experimental science is required, either Physics or Chemistry, equated as 1 point; or both may be offered, and equated as 2 points. In 1912 and thereafter a third science, i. e., a year's course in Botany, or in Zöology, or in Botany and Zöology, may be

offered, to make up the total number of points required.

8. In History, for the A.B. and Litt.B. Courses, the requirement is United States History and Civics, and Ancient History, equated as 2 points. For the B.Sc. Courses, United States History and Civics is required, and equated as 1 point; and any two other courses (Ancient History, Mediæval and Modern History, or English History) may be offered to make up the total number of points required.

### Courses of Study.

Courses of study are offered leading to the degrees of A.B., Litt.B., and B.Sc. The B.Sc. Courses include a general course in Science, and technical science courses in Civil Engineering, Electrical Engineering, Mechanical Engineering, Chemistry, Agriculture, Ceramics and Biology. Short Courses, not leading to a degree, are offered in Ceramics and in Agriculture. The following details may be noted:

- 1. Students entering with the requirements of the course leading to the degree of Litt.B. may substitute beginner's Greek for the modern language of the freshman year, and will take regular freshman Greek in the sophomore year. In this case the degree of A.B. will be conferred on completion of the course.
- 2. The general course in Science is identical in entrance requirements and identical in the freshman year with the technical science courses, but in the sophomore, junior, and senior years provides for electives on the same plan as the courses leading to the degree of A.B. and Litt.B.

3 RUT

In the simplest form, the courses of study may be tabulated as follows:

200	hm	21	Ye	2 10

Latin Greek (Greek A English Mathematics Physical Train		Hours 4 4 4 4=2 18	Litt.B. Latin French or German English Mathematics Physical Training	Hours 4 4 4 4 4=2 ———————————————————————————
Mathematics German English Chemistry Draughting Drill	B.Sc.	Hours 5 4 3 3 4=2 2=1 18	B.Sc. IN— Mathematics German English Chemistry Draughting Drill	Hours 5 4 3 3 4=2 2=1 18

### Sophomore Year

A.B.	Hours	Litt.B:	Hours
History	4	History	4
Physics	3	Physics	3
French or German		French or German	3
Elective	3 6	Elective	3 6
Physical Training	4=2	Physical Training	4=2
111,01001 11011111,		- 11) 0-001 <b>-</b> 1 10-11-11	<del></del>
	18		18
	10	-	10
B.Sc.	77	D C	77.0
D. OC.	Hours	B.Sc. IN—	Hours
	Hours 1	B.Sc. IN—	Hours
History	4	Physics	Hours 3
History Physics	4 3	Physics French or German	3 3
History Physics French or German	4 3 3	Physics French or German English	3 3 2
History Physics French or German English	4 3 3 2	Physics French or German English Technical Electives	3 3 2 9
History Physics French or German English Elective	4 3 3 2 5	Physics French or German English	3 3 2
History Physics French or German English	4 3 3 2	Physics French or German English Technical Electives	3 3 2 9

### Junior Year

### First Term

A.B. Hour. Ethics Logic Bible Elective	Litt.B. Hours  Ethics 3 Logic 3 Bible 2 Elective 9
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# Courses of Study

Ethics Logic Military Science Elective Drill	B.Sc.	Hours  3 3 2 9 2=1 18 Second T	B.Sc. IN— History Military Science Technical Electives Drill	Hours 3 2 12 2=1
		Secona 1	. 67 110	
Ethics Psychology Astronomy Elective	A.B.	Hours 3 3 2 9 17	LITT.B. Ethics Psychology Astronomy Elective	Hours 3 3 2 9 17
Ethics Psychology Astronomy Elective Drill	B.Sc.	Hours 3 3 2 9 2=1 18	B.Sc. IN— History Military Science Technical Electives Drill	Hours 3 1 13 2=1
		Senior \	/ear	
		First To	erm	
Political Econo International L History of Art Elective	aw	Hours 3 1 1 12	Litt.B. Political Economy International Law History of Art Elective	Hours 3 1 1 12 17
Political Econo International L History of Art Elective Drill	aw	Hours 3 1 1 12 2=1 18	B.Sc. IN— Political Economy International Law or Ethi Technical Electives Drill	Hours 3 ics 1 13 2=1
		Second T	Term	
Constitutional History of Art Elective		Hours 4	Litt.B. Constitutional Law History of Art Elective	Hours 4 1 12

B.Sc. Constitutional Law History of Art Elective Drill	Hours 4 1 12 2=1	B.Sc. IN— Constitutional Law Technical Electives Drill	Hours 4 13 2=1
	18		18

### Electives.

Before choosing their electives students must consult the professors concerned, and at the beginning of the sophomore year students in the technical science courses must consult also the head of the technical science course which they intend to pursue. There is a standing committee of the Faculty on electives, to which all elective choices are submitted for approval. All choices are subject to the requirements of the schedule, and will be allowed only when the previous preparation of the student qualifies him for the work chosen.

#### Sophomore Electives

Students in the A.B. and Litt.B. Courses may take, in continuation of their freshman work, any two of the 3-hour sophomore courses in English, Latin, Greek, and Mathematics, but those who have taken beginner's Greek (Greek A) in the freshman year must continue with Greek I in the sophomore year.

Students in the general course in Science will choose, in addition to the required subjects, five hours of work from the following:

- I. Pure Mathematics (4 hours) with those pursuing the Engineering Courses, and Draughting (2 hours = 1).
- 2. Mathematics (3 hours) with those pursuing the Chemical and Ceramics Courses, and Draughting (4 hours = 2).
  - 3. Science (5 hours) with those pursuing the Biological Course.

## Junior and Senior Electives

At the beginning of the junior year students in the A.B., Litt.B., and general B.Sc. Courses will choose three electives. At the beginning of the senior year two of these must be con-

#### Courses of Study

tinued, but the third may be changed for any other senior elective, subject to the general rules.

The following electives are offered:

J	unior.	Senior.
Latin	3	4
Greek	3	4
English	3	4
French	3	4
German	3	4
Mathematics	3	4
Physics	3	4
Chemistry	3	4
Zoölogy and Botany	3	4
Entomology and Biology	3	4
History	3	4
Geology and Mineralogy	3	4
Philosophy	3	4
Political Science	3	4
History and Science of Education	3	4
Moral Philosophy		4
Astronomy		4
Italian	3	_
Spanish	_	4
Hebrew (extra)		2

### Modern Language Options

Certain rules will govern the choice of work in the modern languages.

- I. All students in the B.Sc. Courses will take German in the freshman year.
- 2. Students in the B.Sc. Courses who have offered no German for entrance will take German during the freshman and sophomore years.
- 3. Students in the B.Sc. Courses who have offered less than two years of French for entrance will take French in the sophomore year, except as provided in rule 2.
- 4. All other students in the B.Sc. Courses may choose, subject to approval, either German or French in the sophomore year.
- 5. The junior elective courses (German II and French II) will be open to all students in the Litt.B., and General Science Courses, who have had at least one year of German or of French in college.
- 6. The senior elective courses (German III and French III) will be open to all students in the Litt.B., and General Science Courses, who have had at least two years of German or of French in college.
- 7. Students in the A.B. Course may begin German or French in the junior year as an elective, and continue it through the senior year.

## Technical Elective Courses.

The technical science courses begin to diverge at the beginning of the sophomore year, the differentiation increasing each year thereafter. The course, and not the individual subject, is to be chosen, and transfers from one course to another are allowed only by permission of the Faculty, and on condition that all omitted work is made up. The following is an outline of these courses beginning with the sophomore year:

### Sophomore Year

### CIVIL ENGINEERING

Hours

First Term

Second Term

Hours

Common to All Courses 9 Analytic Geometry and Calculus 4 Descriptive Geometry 3 Draughting 4=2	Common to All Courses Calculus Surveying Draughting	9 4 3 4=2
18		18
Summer	Total Hours	
Field Practice in Surveying	g 100	
Electrical En	GINEERING	
First Term Hours Common to All Courses 9 Analytic Geometry and Calculus 4 Chemical Laboratory 5=2 Mechanical Technology 2=1 Mechanical Drawing 4=2	Second Term Common to All Courses Calculus Surveying Draughting	Hours 9 4 3 4=2
18		18
Summer	Total Hours	
Field Practice in Surveying	100	

#### MECHANICAL ENGINEERING

First Term	Hours	Second Term	Hours
Common to All Courses	9	Common to All Courses	9
Analytic Geometry and Calc	ulus 4	Calculus	4
Chemical Leboratory	5=2	Elementary Kinematics	4=2
Mechanical Technology	2=I	Mechanism	I
Mechanical Drawing	4=2	Mechanical Technology	4=2
	18		18

Summer Total Hours
Mechanical Technology and Shop Work 100

## TECHNICAL ELECTIVE COURSES

## Junior Year

### CIVIL ENGINEERING

First Term		Hours	Second Term	Hours
Common to Al	1 Courses	6	Common to All Courses	5
Calculus and N	Mechanics	5	Mechanics	4
Elements of M	Iachinery	2	Stresses in Roofs and Ba	
	lectrical Engineer	r-	Railway Engineering,	3
ing		3	Civil Engineering Labora	
Draughting		4=2	Draughting	4=2
8 8			3 3	<u> </u>
		18		18
	Summer		Total Hours	
	Field Practice in	Railroad	Surveying 100	
	Elec	TRICAL EN	GINEERING	
	• • • • • • • • • • • • • • • • • • • •			
First Term		Hours	Second Term	Hours
Common to Al		6	Common to All Courses	-
Calculus and N		5	Mechanics	. 4
	d Telegraphs		Dynamo Electrical Macl	
	ectrical Engineer		Elementary Thermodyna	mics I
ing	,	3	Engineering Leboratory	
Physical Labor	ratory	5=2	Electrical Laboratory	5==2
		18		18
•	Summer		Total Hours	
1	Engineering and	Dynamo		
•	Linginicering and	Dynamo	Laboratories 100	
	Месн	ANICAL E	NGINEERING	
First Term		Hours	Second Term	Hours
Common to Al		6	Common to All Courses	
Calculus and M		5	Mechanics	4
	ectrical Engineer		Dynamo Electrical Mach	inery 5
ing	communication Linear	3	Graphic Statics of Struct	
	of Mechanism		Elementary Thermodyna	
Physical Labora		5=2	Engineering Laboratory	2=1
			——————————————————————————————————————	
		18		18
	Summer		Total Hours	
1	Engineering and	Dynamo	Laboratories 100	
	and	_ j		
			'ear	

## CIVIL ENGINEERING

First Term	Hours	Second Term	Hours
Common to All Courses	5	Common to All Courses	5
Applied Geology	3	Hydraulic Engineering	2
Mechanics and Strength of Ma-	-	Geodetic Surveying	3
terials	4	Materials and Methods	of
Highway Engineering and Sani-	-	Construction	3
tary Engineering	3	Practical Astronomy	3
Civil Engineering Laboratory	3=1	Draughting	4=2
Draughting	4=2		
	18		18

#### ELECTRICAL ENGINEERING

First Term Common to All Courses Alternating Currents Mechanics and Strength of Materials Thermodynamics Dynamo Laboratory Electrical Design	Hours 5 4 - 4 2 5=2 2=1 18	Second Term Common to All Courses Alternating Currents Electrical Power Transmis Electrical Railways Dynamo Laboratory Electrical Design	Hours 5 5 5 5 5 5 2 3 5=2 2=1
		NGINEERING	
First Term Common to All Courses Mechanics and Strength of Ma terials Thermodynamics Kinematics Machine Design Engineering Laboratory	Hours 5 - 4 2 6=3 6=3 2=1 18	Second Term Common to All Courses Hydraulic Engineering Thermodynamics Mechanics of Machinery Graphic Dynamics Machine Design Engineering Laboratory	Hours 5 2 3 2 4=2 6=3 2=1 18
s	ophomore	Year	
	Снемія	TRY	
First Term Common to All Courses General Chemistry Analytic Geometry Chemical Laboratory	0	Second Term Common to All Courses Qualitative Analysis Calculus Chemical Laboratory	Hours 9 2 3 10=4 18
	CERAM		
Common to All Courses General Chemistry Analytic Geometry Chemical Laboratory  Summer	9 2 3 10=4 18	Second Term Common to All Courses Qualitative Analysis Calculus Chemical Laboratory  Total Hours	Hours 9 2 3 10=4 18
Field Practice in	Surveyin	g 100	
	AGRICUL		
First Term Common to All Courses General Chemistry Soil Physics Chemical Laboratory Soil Physics, Laboratory	Hours 9 2 3 5=2 5=2	Second Term Common to All Courses Qualitative Analysis Geology Chemical Laboratory Farm Mechanics, Laborato	Hours 9 2 3 5=2 ory 5=2

18

5=2 18

## TECHNICAL ELECTIVE COURSES

Summer		Total Hours	
Field Practice	in Surveyin	ıg 100	
	Вюсо	GY	
First Term Common to All Courses General Chemistry Physiology Zoölogy Chemical Laboratory	Hours  9 2 2 3 5=2 18	Second Term Common to All Courses Qualitative Analysis Geology Astronomy Chemical Laboratory	Hours 9 2 3 2 5=2 18
	Junior	Year	
	Снемі	STRY	
First Term Common to All Courses Quantitative Chemistry Industrial Chemistry Chemical Laboratory	Hours 6 3 15=6	Second Term Common to All Courses Quantitative Chemistry Industrial Chemistry Crystallography Mineralogy Chemical Laboratory	Hours 5 2 3 3=1 5=2 12=5
	18		18
	CERAM		
First Term Common to All Courses Clays, Properties and Uses Quantitative Chemistry Elements of Machinery Elements of Electrical Engine ing Chemical Laboratory	8 <del>=3</del>	Second Term Common to All Courses Clays, Properties and Uses Ceramic Calculations Crystallography Mineralogy Chemical Laboratory	Hours 5 3 4 3=1 5=2 8=3
	18	<b></b>	18
T' , /T	AGRICUL		
First Term Common to All Courses Agricultural Chemistry Invertebrate Zoölogy Bacteriology Agricultural Chemistry, Labo tory Biological Laboratories	Hours 6 3 2 2 ra- 5=2 8=3	Second Term Common to All Courses Horticulture Plant Anatomy Entomology Biological Laboratories	Hours 5 4 2 2 13=5
	18		
	Вюцо	GY	
First Term Common to All Courses Hygiene Invertebrate Zoölogy Bacteriology Chemical Laboratory Biological Laboratories	Hours 6 3 2 2 5=2 8=3	Second Term Common to All Courses Nerve Physiology Plant Anatomy Astronomy Entomology Mineralogy Biological Laboratories	Hours 5 2 2 2 2 5=2
	18	Biological Laboratories	8=3

### Senior Year

#### CHEMISTRY

First Term Common to All Courses Physical Chemistry Organic Chemistry Geology Chemical Laboratory	Hours  5 2 3 3 13=5	Second Term Common to All Courses Conference Organic Chemistry Physical Chemistry Advanced Inorganic Chemitry Chemical Laboratory Inorganic Chemistry Laboratory	1 12=5
	CERAM	IICS	
First Term Common to All Courses Geology Winning and Preparation Clays; Manufacture of Bod Ceramics, Laboratory		Second Term Common to All Courses Glazes, Drying, Firing Geology Ceramics, Laboratory	Hours 5 6 3 10=4 — 18
•	Agricul	TURE	
First Term Common to All Courses Agronomy Veterinary Science Vertebrate Zoölogy Agronomy, Laboratory Biological Laboratories	Hours 5 4 2 5=2 8=3 ———————————————————————————————————	Second Term Common to All Courses Animal Husbandy Vegetable Physiology and Pathology Entomology Dairy, Laboratory Biological Laboratories	Hours 5 4 2 2 5=2 8=3 18
	Droto		

#### BIOLOGY

First Term Common to All Courses Vertebrate Zoölogy Veterinary Science Organic Chemistry	Hours 5 3 2 3	Second Term Common to All Courses Physiology of Nutrition Vegetable Physiology and Pathology	Hours 5 4
Organic Chemistry, Laboratory Biological Laboratories	5=2 8=3	Organic Chemistry Biological Laboratories Biotechnique Laboratory	8= <sup>2</sup> 3=1
	18		18

## State Scholarships in the Scientific School.

For residents of the State of New Jersey scholarships are provided as follows:

1. State Scholarships, Act of March 31, 1890, as amended by Act of March 31, 1905.

These scholarships cover all of the College fees, including the charges for tuition and public-room service and special fees, altogether \$115 to \$160, according to circumstances.

Appointment to these scholarships is determined as follows:

A competitive examination, under the direction of the City Superintendents and the County Superintendent of Schools in each county, is held at the county court-house in each county of the State on the first Friday in June of each year, and the Saturday following (in 1910 on June 3-4).

The whole number of such scholarships to be awarded each year is equal to the whole number of Assembly districts in the State, as follows:

Atlantic	I	Gloucester	I	Ocean	I
Bergen	2	Hudson	12	Passaic	5
Burlington	2	Hunterdon	I	Salem	I
Camden	3	Mercer	3	Somerset	I
Cape May	I	Middlesex	3	Sussex	I
Cumberland	2	Monmouth	3	Union	3
Essex	II	Morris	2	Warren	I

Any candidate who passes the examination is entitled to an appointment, provided there is a vacancy in any district.

Students who have passed the State Competitive Examinations can enter the Scientific School of Rutgers College without further examination.

2. State Scholarships, Act of 1864.

These Scholarships cover the charge of \$80 a year for tuition.

The Scholarships under this Act are awarded on the recommendation of the Superintendent of Schools in each county, to

students who have passed the required examinations. There are, in all, forty such scholarships.

3. Scholarships-at-large, provided by the Trustees of Rutgers College.

These Scholarships, ten in number, cover the charge of \$80 a year for tuition.

For catalogue or other information address Mr. Irving S. Upson, A.M., Registrar.

# County Superintendents.

The following are the names and addresses of the county Superintendents of Public Instruction:

Atlantic, HENRY M. CRESSMAN, Egg Harbor City.

Bergen, B. C. Wooster, Hackensack.

Burlington, HERMAN A. STEES, Beverly.

Camden, Charles S. Albertson, Magnolia.

Cape May, AARON W. HAND, Cape May City.

Cumberland, JOHN N. GLASPELL, Bridgeton.

Essex, A. B. MEREDITH, Nutley.

Gloucester, Daniel T. Steelman, Glassboro.

Hudson, M. H. Kinsley, Hoboken.

Hunterdon, JASON S. HOFFMAN, Flemington.

Mercer, Joseph M. Arnold, Princeton.

Middlesex, H. Brewster Willis, New Brunswick.

Monmouth, John Enright, Freehold.

Morris, J. Howard Hulsart, Dover.

Ocean, CHARLES A. MORRIS, Toms River.

Passaic, Edward W. Garrison, Paterson.

Salem, J. A. Wentzell, Elmer.

Somerset, H. C. Krebs, Plainfield.

Sussex, RALPH DECKER, Sussex.

Union, J. J. SAVITZ, Westfield.

Warren, Franklin T. Atwood, Hackettstown.

# Register of Students.

#### FELLOW

Residence Rooms
Alford, Edwin Conrad, B.Sc. Brooklyn, N. Y. 17 Mine St.
Rutgers College, 1909
Vander Poel Fellow in Chemistry

### GRADUATE STUDENTS

### Only the major subject is named

	Residence	Rooms
Bascom, Frederick Locke, Litt.B.	Middlebush, N. J.	73 Winants Hall
Rutgers College, 1909		
Chemistry		ı
Brown, Percy Edgar, B.Sc.	Woodbridge, N. J.	116 Hamilton St.
Rutgers College, 1906; A.M., 1909		
Agricultural Bacteriology		
Dickerson, Edgar Leek, B.Sc.	Newark, N. J.	Newark, N. J.
Rutgers College, 1902		
Entomology		•
Hart, George Wilmot, Litt.B.	Asbury Park	84 Bayard St.
Rutgers College, 1909		
Chemistry		

#### SENIOR CLASS

### Class of 1910

## A indicates A.B. Course; L-Litt.B. Course; S-B.Sc. Course

	Course	Residence	Rooms
Atwood, Will Gillespie	S	Belvidere	Bleecker Pl.
Bowler, Frank Iverson	S	Woodbridge	Woodbridge
Butler, Charles William, 2nd	S	East Hackensack	114 College Ave.
Case, Willard Trotter	S	Ballston Spa, N.	Y. 78 College Av.
Coleman, David Fleming			Bleecker Pl.
Conger, Alexander Millspaugh			12 Hertzog Hall
Coplan, Hyman Nathen		Elizabeth	Elizabeth
Denise, Tunis	S	Freehold	Bleecker Pl.
DuBois, Marvin Ketcham	L	Freehold	134 Winants Hall
Durfee, Jesse Fitzgerald	A	Central Bridge,	N. Y. 14 Hertzog
Duryee, William Budington, Jr.		Freehold	134 Winants Hall
Faussett, William Wilson	S	Trenton	77 Hamilton St.
Franklin, Kenneth Sherman	S	New Brunswick	17 Mine St.
Garrison, William Powell	S	Roadstown	78 College Ave.

	Course	Residence	Rooms
Green, Clarence Whitaker	S	Brooklyn, N. Y.	52 College Ave.
Green, George M	A	Flushing, N. Y.	Bleecker Pl.
Green, Harry Dunn,	S	Salem	95 College Ave.
Hand, Morgan, Jr.	S	Ocean City	18 College Ave.
Hansen, Andrew	A	Queens, N. Y.	12 Hertzog Hall
Hanson, Thomas Loughlin	S	Perth Ambov	17 Mine St.
Hommann, Charles Chauncey, Jr.	A	Perth Amboy	18 College Ave.
Jahn, Julius Ferdinand, Jr.	S	Linden	61 Winants Hall
Ketcham, Clarence Searle	L	Newburgh, N. Y	. 52 College Ave.
Leslie, Edwin Thomas	S	Newark	Bleecker Pl.
McMichael, Arthur Thomas	S	Laurel Springs	58 Winants Hall
Mason, Frank Edgar	A	Newark	78 College Ave.
Moffett, Ernest Cutter	S	Fords	Fords
Murphy, Arthur Boyle	S	Albany, N. Y.	95 College Ave.
Nafey, Herbert William	S	Highland Park,	Highland Park
Noe, Sydney Philip	S	Woodbridge	Woodbridge
Perlee, Ralph Nevius	S	New Brunswick	179 New St.
Pitcher, Henry Payson	L	Hudson, N. Y.	114 College Ave.
Powell, Henry Rice	S	Bridgeton	95 College Ave.
Powers, Louis	S	Elizabeth	Elizabeth
Rugen, Robert Ernest	S	Bound Brook	137 Winants Hall
Russum, William Abel Rogniat	L	Elizabeth	52 College Ave.
Stryker, Russell Foote	Α	Bound Brook	127 Winants Hall
Thomson, James Claude	S	Middlebush	114 College Ave.
Tozier, Edwin Stone	S	Warsaw, N. Y.	102 Winants
Van Mater, Augustus Blanchard	S	Highland Park	Highland Park
Van Winkle, Frank Hasbrouck	S	Jersey City	18 College Ave.
Winne, Walter Griffen	L	N. Hackensack	114 College Ave.
Wyckoff, Nathaniel Cain	S	Millstone	Ballantine Gym.
Yates, Charles Manley	S	New Brunswick	235 Hamilton St.

## JUNIOR CLASS

## CLASS OF 1911

A indicates A.B. Course; L-Litt.B. Course; S-B.Sc. Course

	Course	Residence	Rooms
Baldwin, George Howard	S	Brooklyn, N. Y.	52 College Ave.
Bascom, Perry Hadwick	L	Bound Brook	73 Winants Hall
Becker, William Voigt	A	Newark	99 Winants Hall
Beekman, Jesse Harold	S	Sayreville	17 Mine St.
Best, Harold Silas	S	New Brunswick	243 George St.
Brewster, Herman Clark	S	Cornwall, N. Y.	77 Winants Hall
Burns, Alan Elwin	S	New Brunswick	26 Winants Hall
Carl, Malcolm Langstroth	S	Blomfield	78 College Ave.
Casale, Vincent James	A	Newark	78 Winants Hall
Chedister, Edwin Stanley	А	Newark	17 Mine St.
DeBaun, Roscoe William	S	Caldwell	95 College Ave.

	Co	urse	Residence	Rooms
Dewald, Ernest		Α	New Brunswick	22 Morris St.
Dixon, Harold Wilson		S	Southampton, N.	
Durham, Willard Conklin		S	New Brunswick,	264 Seaman St.
Eakins, Wallace Todd			Paterson	73 Winants Hall
Elmendorf, DuMont Frelinghuyse	en	A	New Brunswick	69 Albany St.
Fell, Scott Miller		S	Trenton	78 College Ave.
Ferguson, John DeLancey		A	Plainfield	105 Winants Hall
Forsyth, Joseph Robert		S	Little Falls, N. Y	
Frost, Henry Delevan		Α	Dairyland, N. Y.	
Fulton, Clarence Edward		S	New Brunswick	214 Handy St.
Haasis, Ferdinand Wead		S	Rahway	Rahway
Hawver, William Chauncey		L	Cleverack, N. Y.	78 College Ave.
Heidingsfeld, Ralph		S	New Brunswick	40 Albany St.
Henszey, Roy Ormonde		S	Ashland	140 Winants Hall
Herber John LeRoy		S	Delmar, N. Y.	Hamilton St.
Hunt, Augustus		S	Philadelphia, Pa.	Bleecker Pl.
Jacquart, Charles Edward		S	South River	18 College Ave.
Jones, George Edward		S	Hackensack	114 College Ave.
Keebler, Charles Morris		S	Glassboro	63 Winants Hall
Kreh, Henry, Jr.		S	Elizabeth	12 Winants Hall
Leslie, Harold David		S	Newark	23 Winants Hall
MacDonald, William Henry		L	Dayton	Dayton
McDougall, Walter Burroughs		S	We st field	110 Winants Hall
Manley, Andrew Ten Eyck		S	New Brunswick	132 Hamilton
Marcley, Allen Francis		Α	Schenectady, N.	Y. Hertzog Hall
Neander, John		Α	Albany, N. Y.	29 Hertzog Hall
Nelson, Samuel Maximilian		S	Highland Park	Highland Park
Oley, Warren Wilcox		S	Wortendyke	140 Winants Hall
Palmer, Dorrance Wilson		S	Brooklyn, N. Y.	117 Winants
Patterson, Raymond Sears		S	Metuchen	Bleecker Pl.
Pockman, Theodore Niver		Α	New Brunswick	219 Townsend St.
Reid, Louis Raymond		L	Warsaw, N. Y.	78 College Ave.
Rochford, Willis Earl		S	Trenton	77 Hamilton St.
Safford, George		S	Brooklyn, N. Y.	52 College Ave.
Sangster, George Munson, Jr.		S	Glen Ridge	52 College Ave.
Schenck, Ferdinand Schureman,	Jr.	Α	New Brunswick	Seminary Pl.
Schenck, Willard Earle		S	New Brunswick	28 Paterson St.
Sexton, John Roderick		S	Long Branch	422 George St.
Sillcox, Harold		S	Newark	78 College Ave.
Smith, Frederick Martin		S	Plainfield	105 Winants Hall
Smith, Howard Anthony		S	New York, N. Y	
Steelman, Hiram, Jr.		S	Ocean City	Ballantine Gym.
Stelle, Clarkson Provost		S	Milltown	Milltown
Stillwell, Earle Cook		S	Freehold	136 Winans Hall
Van Dyck, Louis Bevier		Α	Newark, $N. Y.$	77 Hamilton St.
Van Dyck, Leonard Kip		A	Philmont, N. Y.	Bleecker Pl.
Van Ness, Lloyd Mervin		S	Caldwell	95 College Ave.
Voorhees, John Haring		S	New Brunswick	College Farm
Voorhees, Tracy Stebbins		Α	New Brunswick	Bishop Place

### SOPHOMORE CLASS

### CLASS OF 1912

A indicates A.B. Course; L-Litt.B. Course; S-B.Sc. Course

	Cours	e Residence	Rooms
Alverson, James K	S		17 Mine St.
Amos, Harold Curtice	A	Utica, N. Y.	77 Hamilton St.
Arthur, John	S	Newark	Newark
Auchter, George David	S	Jersey City	114 College Ave.
Bauer, Walter Charles	S	Linden	34 Winants Hall
Bergamini, Herbert Muhlenberg	5	Brooklyn, N. Y.	52 College Ave.
Bissett, John Vail	S	New Brunswick	420 George St.
Blatz, Edward Francis	S	Elizabeth	Elizabeth
Bloom, Walter Sax	A	Catskill, N. Y.	45 Hertzog Hall
Bowen, Walter Cox	S	Shiloh	78 College Ave.
Briegs, Fred Arthur	S	Perth Amboy	17 Mine St.
Briggs, Leonard Stott	S	Firthcliffe, N. Y.	
Burstein, Joseph	S	Newark	Newark
Cadmus, Harold Jasper	S	Ridgewood	101 Hamilton St.
Campbell, Alan Ditchfield, Jr.	A	New Brunswick	146 Livingston Av.
Cleaver, Robert Stephen	S		7. Alumni House
Cook, Lester Emery	S	Newark	55 Winants Hall
Cook, William Benjamin	L	Millwood, N. Y.	Hamilton St.
Cooper, Henry Clifton	S	Palmyra	95 College Ave.
Cooper, Thomas Shipman	S	Cranford	95 College Ave.
Feldman, Jacob Joseph	S	Bound Brook	Bound Brook
Fisher, Elbron	S	South River	78 College Ave.
Fitting, Francis Clyde	S	Philadelphia, Pa.	135 Winants
Foster, Samuel Forman	S	Bayhead	Bleecker Pl.
Fountain, Fred Montgomery	S	Hackensack	114 College Ave.
Gies, Russell Woodworth	S	Newark	Bleecker Pl.
Gilbert, Seymour Parker, Jr.	A	Bloomfield,	24 Hertzog Hall
Gladding, Augustus Lemuel	S	Lincoln, Cal.	78 College Ave.
Glander, Frederic	S	Bloom field	43 Winants Hall
Groendyke, Jacob Walter	S	Monmouth Junc.	Monmouth Junc.
Haasis, Paul Wead	S	Rahway	Rahway
Hageman, Aaron Martin	S	Bound Brook	Bound Brook
Hagemann, George Edward	S	Newark	Newark
Hagen, Albert Lewis	S	Cranford	62 Winants Hall
Halsted, Edwin Howe	S	New Brunswick	21 Livingston Av.
Havens, Valentine Britton	Α	Brooklyn, N. Y.	Bleecker Pl.
Hegstrom, Carl Frederick Nicholas	S	Perth Amboy	Perth Amboy
Heilmann, Herbert William	S	Newark	17 Winants Hall
Herrman, William Gettier	Α	Plainfield	77 Hamilton St.
Hotaling, Henry Kilmer	Α	Delmar, N. Y.	45 Hertzog Hall
Jacobson, Henry Victor	S	Newark	Newark

	Course	Residence	Rooms
Keller, Oran	S	New Brunswick	206 George St.
Kieffer, Ralph Jacob	S	Katrine, N. Y.	66 Winants Hall
Leistner, August	S	Elizabeth	Elizabeth
Lennox, Weston	S	Hamburg	76 Winants Hall
Liebschutz, Lionel F	S	Newark	78 Winants Hall
Llewellyn, Alson Carlton	Š	Moorestown	34 Winants Hall
McGovern, John Francis, Jr.	S	New Brunswick	131 French St.
Mailler, John Preston	S	Cornwall, N. Y.	66 Winants Hall
Mailler, James Walter	S	Cornwall, N. Y.	66 Winants Hall
, •	S	Rahway	
Marsh, John Osborn	S	Metuchen	Rahway
Martin, George Willard	S	Bloomfield	Metuchen
Martin, William Herbert			43 Winants Hall
Merrill, Louis Fowler	S	Sergeantsville	110 Winants Hall
Morrison, John Dittgen	S	Ridgefield Park	77 Hamilton St.
Moseman, Milo Claude	S	Big Hollow, N.	
Nelson, Alfred Arthur	S	South Amboy	108 Winants Hall
Nevius, John Richard	S	East Millstone	East Millstone
Peebles, Herbert Ramsey	S	Paterson	101 Hamilton St.
Pierson, Harold Clarkson	S	Newark	124 Winants Hall
Press, Jacob	A	Harrison	Harrison
Relyea, George Lorenzo	S	New Paltz, N. Y	'. 133 Somerset
Robinson, George Raymond	S	Moorestown	34 Winants Hall
Rogers, Ethan Clark	S	New Market	New Market
Ross, Donald	S	Newark	18 College Ave.
Ross, Vivian Clinton	A	New Brunswick	300 George St.
Schmidt, Robert	S	Woodbine	133 Somerset St.
Schofield, Harold Ellison	S	Philadelphia, Pa.	
Scott, Edward Collier	S	Oswego, N. Y.	114 College Ave.
Scudder, Ernest Weld	A	Thomas, Okla.	77 Hamilton St.
Shapiro, Elmer Bernard	A	Somerville	Somerville
Smith, Edward Tiel	S	Coopersville, Mi	
Sichterman, Nicholas Sikkie	A	Magnolia	58 Winants Hall
Smith, Richard Alexander	S	New Brunswick,	
Smith, Stephen Parsons	S	Leesburg	23 Schuyler St.
Smock, William Emmons	S	Newark	55 Winants Hall
Stier, Wm. Rudolf Fuerchtegott	A		47 Hertzog Hall
	S	Sayreville	
Terrill, Harold Morlock	S	Rahway	Rahway
Titsworth, Arthur Bentley		Plainfield	
Titus, Charles Augustin	S		178 Townsend
Urbano, Francesco Giglio	A		V. 31 Winants
Van Derwerker, Earle Edward	S	Bacon Hill, N.	
Van Ness, Earle Benjamin	S		95 College Ave.
Van Wagner, Walter Martin	S	Roselle	Roselle
vom Lehn, Reinhold	S	Elizabeth	Elizabeth
Walker, Elmer Leigh	S	Newark	17 Winants Hall
Walrath, Paul	S	Newark	Bleecker Pl.
Wehrly, Charles Swackhamer	S	Somesville	Somerville

•	Course Residence	Rooms
White, Dexter	S New York, N. Y	. 52 College Ave.
Wilsey, Leroy Colver	L Newark	70 Winants Hall
Woelfle, Frederick	S Brooklyn, N. Y.	90 Winants Hall
Young, Edmund Wilkins	S Astoria, N. Y.	102 Winants Hall

### FRESHMAN CLASS

### CLASS OF 1913

A indicates A.B. Course; L-Litt.B. Course; S-B.Sc. Course

	Course	e Residence	Rooms
Allen, Harry Milton	S	Basking Ridge	1 Hardenburgh St.
Appleby, Stewart Hoffman	S	Asbury Park	113 Winants Hall
Armstrong, Richard Clinton	S	New Brunswick	184 Livingston Av.
Ball, William Carol, Jr.	S	Rutherford	7 Winants Hall
Barr, Thomas Turner, Jr.	S	Metuchen	52 College Ave.
Bastedo, Walter	Α	Dayton	Dayton
Basten, Edgar Van Dyck	S	Kingston, N. Y.	114 College Ave.
Beckwith, Charles Stewart	S	Olean, N. Y.	96 Paterson St.
Bell, Whitfield Jenks	S	Hoboken	94 Easton Ave.
Bergen, Arthur DeLong	S	Bound Brook	Bound Brook
Bouton, Robert Ogden	S	Elizabeth	95 College Ave.
Bowers, Clark Christopher	S	Washington	142 Winants Hall
Buechner, Casper	S	Woodhaven, N.	Y. 30 Winants
Burke, James Francis	S	New Brunswick	99 Throop Ave.
Cathcart, Edwin Furman	S	South River	95 College Ave.
Chamberlin, Laban Hammill	Α	New Brunswick	141 Paterson St.
Chase, Edward Dudley	S	Rahway	Rahway
Chobricher, Jacob	Α	Newark	Newark
Coffey, John Edward Develin	S	Hackensack	114 College Ave.
Conover, Frank Hayward	S	Perth Amboy	113 Winants Hall
Cook, Edgar Chesebro	S	Atlantic Highlar	ids Bleecker Pl.
Cooper, Ralph Emerson	S	Newark	Newark
Cozzens, Henry Anthony, Jr.	S	Newark	87 Winants Hall
Crowell, Reginald Bulkley	S	Metuchen	Metuchen
Davis, Louis Morris	S	Bound Brook	Bound Brook
de la Torre, Austin Lino	S	Guadalahara, Me	ex. 98 Easton Ave.
Dennis, Clifford Ezekiel	S	Hamburg	95 Bayard St.
Deyo, Elting Forsythe	S	Fairfield, Conn.	130 Winants
Dickerson, Rawson Parkhurst	S	Newark	23 Winants Hall
Drake, Willet Harold	Š	Trenton	· 81 Winants Hall
Ellis, Arthur Wesley	А	Kingston, N. Y.	52 College Ave.
Enk, John Clyde	Α	Somerville	Somerville
Field, Frank Edwin	S	Somerville	Somerville
Fielder, Cecil Gray	S	Lakewood	31 Hertzog Hall
Flanagin, Francis Walker	S	Highland Park	Highland Park

	Course	Residence	Rooms
Folsom, Joseph Kirk	S	Newark	118 Winants Hall
Foulds, Henry William	S	Ocean City	29 Hertzog Hall
Fretz, Leo Hasleden	S	Cedar Grove	126 College Ave.
Green, Harry Young	S	Baptisttown	83 Easton Ave.
Grymes, Elmer Smith	S	New Brunswick	210 Handy St.
Haasis, Cuthbert Wead	S	Rahway	Rahway
Hambrock, Charles	S	Newark	79 Paterson St.
Hambrock, Louis, Jr.	S	Newark	70 Paterson St.
Hankin, Montague	S	Millington	163 New St.
Hauser, Emil	S	Brooklyn, N. Y.	18 College Ave.
Havens, Donald Leston	L	Brooklyn, N. Y.	Bleecker Pl.
Helm, William Henry	S	New Brunswick	224 Suydam St.
Hickman, John Parker, Jr.	S	Asbury Park	7 Winants Hall
Hornbruch, Walter	S	Elizabeth	12 Winants Hall
Howell, Raymond Ditmars	S	New Brunswick	255 Suydam St.
Huber, Howard Frederick	S	Woodbridge	Woodbridge
Hunt, Melvin Mundy	S	South Amboy	South Amboy
Johnson, Frederick James	S	Point Pleasant	146 Winants Hall
Johnson, John Henry	A	Rahway	Rahway
Julie, Howard Anthony	S	Brooklyn, N. Y.	18 College Ave.
Koehler, George William	S	Bound Brook	Bound Brook
Lantz, Leslie Charles	S	Monroe	16 Winants Hall
Laurent, Joseph Donjon	S	Westfield	145 Winants Hall
Lees, Ralph Samuel	S	Newark	70 Winants Hall
Leonard, Lambert Jenkins	S	Highland, N. Y.	31 Hertzog Hall
Leslie, Jesse Burgess	S	Newark	22 Hertzog Hall
Low, Frederick Henry	S	Passaic	114 College Ave.
McCallum, William Henry	S	New Brunswick	68 Schureman St.
McConnell, James Roy	S	Calgary, Canada	Somerville
McDougall, Neil	S	Buffalo, N. Y.	193 George St.
McKinney, Howard Decker	S	Pine Bush, N. Y.	
Masker, Claremont Whitmee	S	Somerville	Somerville
Menaker, George	S	Passaic	143 Winants Hall
Merrill, George Raymond	S	Washington	116 Winants Hall
Milliken, Mahlon George	S	Bloomfield	Bloomfield
Mitchell, Oliver Fritts	S	Pittstown	142 Winants Hall
Morton, Thomas Vassar	S	Newark	Newark
Mueller, Christian Jacob	S	Egg Harbor City	126 College Ave.
Mulhern, Donald Dufferin	S	Jamaica, Vt.	17 Mine St.
Nelson, Lester Ellsworth	S	New Market	New Market
Nelson, Thurlow Christian	S	Highland Park	Highland Park
Newmark, Herman Albert	S	Plainfield	84 Church St.
Obecny, Joseph S	S	Brooklyn, N. Y.	90 Winants
Opdycke, Lawrence Hall	S	West New York	25 Hertzog Hall
Orvis, Walter E	S <sup>r</sup>	Rahway	Rahway
Overton, Chalmers Wolfe-Tone	S	Plainfield	77 Hamilton St.
Peacock, Walter Miller	S	Bridgeton	121 Winants Hall

	Course	Residence	Rooms
Pingry, Van Wagenen	S	Millbrook, N. Y.	18 College Ave.
Pitcher, Ralph Morgan	S	Hudson, N. Y.	114 College Ave.
Prentiss, Arthur Arnold	S	Highland Park	Highland Park
Prichard, Howard Milton	S	Sea Bright	42 Winants Hall
Putnam, John Henry Stowits	A	New Brunswick	II Union St.
Ramsey, George Herbert	Α	Olean, N. Y.	163 New St.
Randolph, Alstyn Fitz	S	New Brunswick	45 Delevan St.
Robins, George Stanley	S	Plainfield	23 Winants Hall
Rosenthal, David	S	New York, N. Y	
Ross, Miles	A		108 Livingston Av.
Rossell, Irving Rowland	S	Rahway	Rahway
Rue, Floyd Eldridge	S	Old Bridge	Old Bridge
Rundall, Olin Ruteledge	S	Amenia, N. Y.	87 Winants Hall
Russell, Harold Alonzo	S	Caldwell	22 Paterson St.
Savage, Charles Knebel	A	Asbury Park	Bleecker Place
Savage, Herbert Knebel	A	Asbury Park	Bleecker Place
Schecter, Morris	S	Newark	Newark
Schenck, Cornelius Frelinghuysen	S	Plainfield	20 Hertzog Hall
Schenck, Harold William	Α	Plainfield	20 Hertzog Hall
Schoonmaker, Elmer Lynford	S	Paterson	22 Hertzog Hall
Sharkey, Samuel Miller	S	Trenton	81 Winants Hall
Sheffer, Homer Lewis	A	Linlithgo, N. Y.	39 Hertzog Hall
Silvers, Earle Reed	Α	Rahway	Rahway
Simmons, Edward Brooks	S	Brooklyn, N. Y.	97 Winants Hall
Simon, Herbert	S	Newark	Newark
Sims, Edward Frank	S	Stelton	Stelton
Slater, James Rodenburg	S	Cairo, N. Y.	22 Paterson St.
Smedley, Horace Thomas	S	Glasboro	63 Winants Hall
Smith, Charles Wemple	Α	New Brunswick	27½ Bartlett St.
Smith, Hilmar Frederick	S	New Brunswick	157 College Ave.
Smith, Sandford Roy	S	Waterloo	124 Winants Hall
Smith, Thomas Darmon	S	Milford	Hardenbergh St.
Sparrow, Robert Gregory	S		77 Hamilton St.
Staat, William Ellsworth	S	New Brunswick	301 Redmond
Stackhouse, James Archer	S	Bridgeton	121 Winants Hall
Stanton, Royal Aaron	Α	Lawyersville, N.	Y. Hertzog Hall
Stone, Joseph Harry	S	Trenton	Trenton
Stover, Charles Coane	S	Trenton	Bleecker Place
Stover, Edward Conklin, Jr.	S	Trenton	Trenton
Thomas, Alfred Weber	S	Short Hills	170 Somerset St.
Tobey, James Philip	S	Kingston, N. Y.	97 Winants Hall
Traver, Charles Adelbert	S	Brooklyn, N. Y.	7 Winants Hall
Turner, Robert Wilson	S	Yonkers, N. Y.	78 College Ave.
Van Deripe, Frederick Neefus	S	New Brunswick	145 Somerset St.
Van Mater, Henry Lear	S	Highland Park	Highland Park
Van Riper, Charles King	S	Paterson	41 Winants Hall
Van Wagenen, Marvin James	S	Ohioville, N. Y.	Hamilton St.

Van Winkle, Theodore

Brandenburg, Frank Lavine

Buck, Littleton Kirkpatrick

Course Residence

S Rutherford

Rooms

144 Winants Hall

Watson, Harold Samuel Weis, Francis Elmer Williams, Stanley Neale Wyckoff, William LeRoy	S New Brunswick S Trenton S Westfield A Jamaica, N. Y.  144 Winants Hall 186 George St. Trenton S Winants Hall 95 College Ave.	
SPECIAL	STUDENTS	
Not Candidate	S FOR A DEGREE.	
A indicates Classical Sch	nool; S—Scientific School	
DeMeester, Peter Gaffney, Hugh Greenwood, John Loveridge Stout, George Walter	A Paterson S Jersey City S Oshkosh, Wis. A New Brunswick 33 Hertzog Hall 18 College Ave. 170 Somerset St. 52 Hertzog Hall	
Sum	MARY	
Fellow Graduate Students	I 4	
SENIORS, CLASS OF 1910	4 44	
JUNIORS, CLASS OF 1911 SOPHOMORES, CLASS OF 1912	60 92	
Freshmen, Class of 1913	134	
SPECIAL STUDENTS	4	
Total	339	
SHORT COURSES	IN AGRICULTURE	
Student	s 1909–10	
G indicates Course in General Agriculture and Dairy Farming F indicates Course in Fruit Growing and Market Gardening		
Afflerbach, Harry Barnes Amendt, Peter Conrad Anderer, Ambrose Annin, Robert Edwards Axson, Margaret Randolph Ayares, Franklin Taylor Black, Bernard Bradshaw, Frank	G Perth Amboy G Belvidere G Neshanic Sta. G South Orange F Princeton G Salem G Salem G Salem F Millville F Trenton  G Perth Amboy 223 George St. 86 Commercial Ave. 18 Jones Ave. The Bayard 50 Welton St. 96 Commercial Ave.	

G Freehold

F No. Arlington 92 Commercial Ave.

223 George St.

	Course	Residence	Rooms
Carpenter, Jacob Hockman	G	Freehold.	178 George St.
Chanin, Isidor		Flemington	26 Peace St.
Collins, William Everett	F	Monmouth Juncti	on
Conover, Robert		Manasquan	Ryder's Lane
Cooke, Edward Ambrose		New Brunswick	7 Livingston
Cooper, Peter John		Plainfield	178 George St.
Donaldson, Roy Argyle	.F	East Orange 83	Commercial Ave.
Douglass, Ellwood	F	Cold Spring	168 George St.
Drew, Leon Judson	G	Vernon	50 Welton St.
Dupre, James Neill	G	Bloomfield	270 Redmond St.
Errickson, Charles Benjamin		Monmouth Juncti	•
Finley, Milton Augustus		Vineland	168 George St.
Fitz Randolph, Fred		New Brunswick	222 Seaman
Fleming, Martin		Leonardville 86	
Foskett, Walter Dana		Germantown Pa.	26 Redmond St.
Fredericks, Royal Alwood		Midvale	56 New St.
Gibson, William Walter		Princeton	300 Suydam St.
Gosse, Edwin Bronson		Morris Plains	257 George St.
Greene, William	F	Elm	38 Bishop St.
Grieder, Emil, Jr.	F	Paterson	50 Welton St.
Hammond, LeRoy,	G	Kingston, N. Y.	178 George St.
Harvey, Frank Willard	G	Pensauken	222 Seaman St.
Herzog, Alfred Christopher	F	Jersev City	
Heuvel, James Theodore van	den G	Fair View	178 George St.
Hickman, Beulah	F	New York, N. Y.	
Holcombe, Harry Britton	G	Lambertville	26 Redmond St.
Janoff, Sophie	F	Flemington	308 George St.
Kelsey, William Dana	G	Chester	22 Jones Ave
Kirkpatrick, David Hanscom	F	Jamesburg	
Krausse, Albert Laurence	G	New York, N. Y.	18 Jones Ave.
Kuntz, Abraham M	G	Metuchen	Ť
Leadam, John Estridge	F	Newark 83	Commercial Ave.
Lincoln, Arthur W	G	South Orange	
Longstreet, William	G		Commercial Ave.
Lovendahl, Magnus Ladwig	G	Burlington	Ryder's Lane
Lydecker, Irving Smith	F	New Brunswick	R. F. D. No. 5
McDonald, James Joseph, Jr.	F	Hackettstown	140 George St.
Maher, Mrs. Agnes Adele	F	Chester	108 Suydam St.
Mills, Herbert Clyde	G	Sewell	223 George St.
Moore, Ellwood Burdsall	G	Newtown, Pa.	146 George St.
Nodine, Frank Howard	F	Springfield	22 Jones Ave.
Osmun, Richard Orton	G	Delaware	223 George St.
Otis, William Bennett	F	New Brunswick	142 George St.
Palmer, Raymond Arlington	G	New Brunswick	R. F. D. No. 3
Paul, Lyman	F	Millville 96	Commercial Ave.
Paul, William Mickle	F	Moorestown	84 Carroll Place
Peterman, Howard A	G	Cherryville	168 George St.

•	Course	Residence	Rooms
Phillips, Brice Bedell	F	Huntsville	178 George St.
Powell, Samuel Stewart	G	Salem	50 Welton St.
Riker, George Wright	G	Trenton	
Robbers, Walter R	G	New Brunswick	R. F. D. No. 1
Roop, Marcus J	G	Ridgefield	
Schubert, Morris	G	New Brunswick	26 Peace St.
Schutzback, Israel	F	Freehold	38 Bishop St.
Shaefer, Harry Warren	G	Newtown, Pa.	56 New St.
Stevenson, Leonard DuBois	G	Bridgeton	168 George St.
Stokley, Robert Gedney	G	East Orange	Livingston Manor
Storms, George Alfred	G	Leonia	22 Jones Ave.
Sutton, Leon Woodbury	G	Annandale	Ryder's Lane
Tarlach, Leo Henry	G	Bound Brook	
Van Nuis, Charles Strong	G	New Brunswick	134 Livingston Av.
Van Nuis, Edith	F	New Brunswick	R. F. D. No. 2
Voorhees, Abram De Hart	G	Franklin Park	
Wais, William Hermann	G	New Brunswick	College Farm
Whittle, Harry Evans	F	Caldwell	

Short Course students—75.
Total student registration—414.





